

**Aviation Rulemaking Advisory Committee (ARAC)  
Emergency Evacuation (EE) Issues**

**Meeting Minutes**

**DATE:** December 7, 2000  
**TIME:** 8:30 a.m.  
**LOCATION:** Aerospace Industries Association of America  
1250 I Street NW., Suite 1200  
Washington, DC 20005

**Call to Order/Administrative Reporting**

Billy Glover, Assistant Chair, called the meeting to order, welcomed the attendees, requested they introduce themselves (see attached sign-in sheet), and reviewed the agenda items. John McGraw, Acting Assistant Executive Director, read the required statement for governing the conduct of the meeting.

**Action Items**

Item	Discussion
1	FAA revising green book; expect to have completed by end of year
2	Completed
3	Completed
4	Ongoing
5	Ongoing
6	Ongoing
7	Ongoing
8	Completed

**September Meeting Minutes**

Members accepted the minutes as amended.

**Executive Committee (EXCOM) Report**

Bob Robeson attended the Executive Committee meeting for Mr. Glover. Mr. Robeson indicated that committee members discussed voting procedures and proxy voting, and the ARAC and ARM bulletin boards.

Mr. Tony Fazio, Executive Director, EXCOM, briefed attendees on several issues:

- The FAA does not believe in the use of voting, in general, other than for administrative purposes to determine if there is a consensus of opinions. When consensus cannot be achieved, use the guidelines in the ARAC Procedures (the "green book"). Proxy voting will not be used, and issues that raised the concept of proxy voting, i.e., meeting locations, availability of individuals to attend ARAC meetings, funding, etc., have been addressed.
- A full meeting of ARAC will be held February 6 in Washington, DC.
- The ARAC bulletin board has been revamped to make it more user-friendly (<http://www.faa.gov/avr/armhome.htm>). It includes a calendar of events, notices of public meetings, meeting minutes, member information, and composition of issues and working groups. The site also offers general rulemaking information and hot links to other regulatory

information sites, such as the *Federal Register*, OMB, etc. The FAA is trying to make ARAC as transparent as possible.

- Ian Redhead has been named the new Vice Chair of the Airports Issues Group. The position of Vice Chair for General Aviation and Business Aircraft is open.
- A form must be completed and approved to hold ARAC meeting outside the Washington, DC area.

## **FAA Report**

- Status of FAA Rulemaking Projects--Kris Carpenter indicated that she did not distribute the usual Transport Airplanes Directorate (TAD) workload database because of its voluminous size; instead, she had forwarded a summary of the "Better Plan." Six items are listed for the Emergency Evacuation issues group; 2 items are being worked on by the issues group, 1 item is at NPRM stage and has not been returned to the ARAC group, and 3 items are at the rulemaking project record (rpr) stage. Any questions regarding the TAD projects can be directed to Kris.
- EEIG Name Change Status--Brenda Courtney indicated that the FAA had received the EE issues group request for name change, which will expand the scope of the issues group. The Office of Rulemaking is talking with the Flight Standards Office to get its position on participating in the group and hopes to have a response before the March meeting. Also, the FAA will have some comments on the wording of the issue group charter.
- Working Group Procedures--Comments were received from the chairs of the EE and TAE issues group, and the JAA. Comments from the FAA legal office are also expected. More definitive answers will probably be available at the March meeting. Some issues will be incorporated into the green book.
- Cabin Environment (addresses cabin air) TOR--The TOR was revised and resubmitted to the issues group in November. A discussion of the TOR included the appropriateness of tasking it the Occupant Safety issues group; the need to create a new working group to address the task; the type of technical experts needed for the working group; how to approach the task and prioritize the areas identified in the TOR; and timing the tasking to the completion time of a time a National Academy of Science Air Quality Study (mid 2001). Other discussion items addressed language changes and clarification of ambiguities in the TOR. The JAA asked to mention the U.K. House of Lords report on cabin health, as a reference document for the new HWG.  
Members approved unanimously a motion to close out the discussion and to provide written comments to Kris Carpenter (with a copy to Mr. Glover) by December 15.

## **JAA Report**

Edmond Boullay reported that the JAA is preparing comment response documents to the five unilateral Notice of Proposed Amendments (311 through 315) published in August; final agreement on the final rules is expected by June 2001. Mr. Boullay indicated that NPA 314 is of interest to this ARAC issues group; comments will be prepared and coordinated with the JAA study group and the FAA.

## **Cabin Safety Harmonization Working Group (CSHWG) Report**

Tim Holey provided a status report (handout 1) and preliminary report addressing § 25.810 (handout 2) because the working group had been unable to complete the report due to late inputs. Coordination was completed with the JAA and FAA but not with members of the working group. Mr. Holey indicated that coordination with the working group could probably be accomplished by an electronic meeting in January. ARAC members will receive the final report for disposition a minimum of 2 weeks before the March meeting.

Mr. Holey indicated that members of the CSHWG had met informally with Mac McLean of the FAA's Civil Aeromedical Institute (CAMI) after learning that the FAA was expanding its original proposed testing protocol for a study addressing aircraft emergency evacuation.

Dr. McLean indicated that the study—Access to Egress Factors Influencing Evacuation Through Type III Exits—has been on CAMI's books since 1997. Because the CSHWG had concerns about passageway widths and because the NTSB had issued recommendations with similar concerns, the FAA decided to expand the protocol and address some of those issues; JAA concerns will also be addressed. Based on a meeting with Aircraft Certification Service, Dr. McLean was assured that the FAA would pay for the evacuation study. The new design will require 2,544 subjects, the largest evacuation study ever conducted. The JAA, Cranfield University, and the University of Oklahoma will be participants, and additional sources are being contacted to aid in the study. The representative of Transport Canada indicated that his organization would like to participate in the study. Highlights of Dr. McLean briefing included the following:

- Testing will involve real life situations with naïve research subjects to answer key questions. There will be 48 experimental groups of 30, 50, or 70 subjects (50% male/50% female, ages 18 to 65, with different body types) in each group. Subjects will be required to sign an informed consent form.
- A 72-passenger simulator will be used.
- Factors that will be looked at include exit plug disposal locations, subject density in the cabin, subject motivation (effect of financial incentive). Subjects will go through four trials.
- An experienced flight attendant will be in the cabin. Subjects will be briefed on how to open escape hatches. There are no set amount of briefings; briefing will be repeated until subject understands
- There will be several passageway configurations, including two 6-inch passageways (one forward, one aft), a 10-inch wide single passageway, a 13-inch wide passageway, and a 20-inch wide passageway.

Christopher Witkowski questioned the CSHWG tasking and its applicability to NTSB recommendations issued in July 2000, or if the FAA planned to respond in another manner. The FAA indicated that it would have to look further into these issues.

Other discussion items included the status of the draft documents addressing § 25.812 and § 25.1411.

- No progress with the document addressing § 25.812 (notice of proposed rulemaking); it is still with the FAA engineering branch. The issue was addressed in a slide TSO.
- § 25.1411 (slide raft portability): special condition or equivalent safety finding to be used by FAA for e.g., A3XX, on the basis of the draft NPRM. EE Issues group formally recommended that the FAA progress the recommendation to a draft NPRM.

#### **EEIG Consideration of Performance Standards Working Group Final Recommendations**

Five items were presented for consideration for tasking to the ARAC.

<b>Item No.</b>	<b>Description</b>	<b>Discussion/Disposition</b>
1	Reevaluating the appropriate exit sill height at which inflatable assist means, or equivalent, must be provided	--Terms of Reference prepared --Addressed in an NTSB recommendation --Unanimous approval to forward to FAA

2	Passenger Safety Briefing Materials	--Addressed in an NTSB recommendation --Being handled by Flight Standards; advisory circular published February 1999 --ARAC members agreed to put on hold until they could review to the AC
3	Requirements for provision of an evacuation alarm on transport airplanes	--Not enough information to make a decision Unanimous approval to put on hold until recommendation is better understood
4	Replacement of exit signs with internationally-recognized symbology ("green man running")	--Terms of Reference prepared --JAA Cabin Safety Study Group is working on issue and is close to completing an NPA --Task ARAC to harmonize --Unanimous approval to forward to FAA for tasking; cite JAA work on issue
5	Substitution of pyrotechnic signaling devices with alternate visual signal devices	--Terms of Reference prepared --Being addressed by JAR operations group; has operator support -- Forward to FAA for tasking; cite JAA work on issue --Two abstentions (Airbus and Boeing), majority vote to forward to FAA

Members reviewed the draft Harmonization Technical Working Group Charter and determined any issue addressed by it could be handled by the CSHWG. They unanimously denied the charter and agreed the Performance Standards Working Group had completed its taskings.

#### **Other Business**

André Dressler raised the issue of a petition for rulemaking filed by the Independent Pilots Association in 1996 that had never been tasked or responded to. The petition addresses escape means from cargo aircraft. A motion was made that the issues group request the FAA to task ARAC with looking into emergency egress means for cargo only aircraft and include in the task that the petition is pending. Members unanimously approved the motion. Mr. Dressler indicated that he would provide Mr. Glover with specific information to be included in the transmittal letter.

Tentative EEIG meeting dates are:

<b>Date</b>	<b>Location</b>
March 29	Washington, DC
June 28	Seattle, Washington
September 13	Seattle, Washington
December 6	Washington, DC

The meeting adjourned at 1:25 p.m.

Billy Glover  
Assistant Chair

**Approved with Revisions:** March 29, 2001